OIPE IAP91 OCT 31 2007 PATENT & TRADEMARK OFFICE

FIG.1

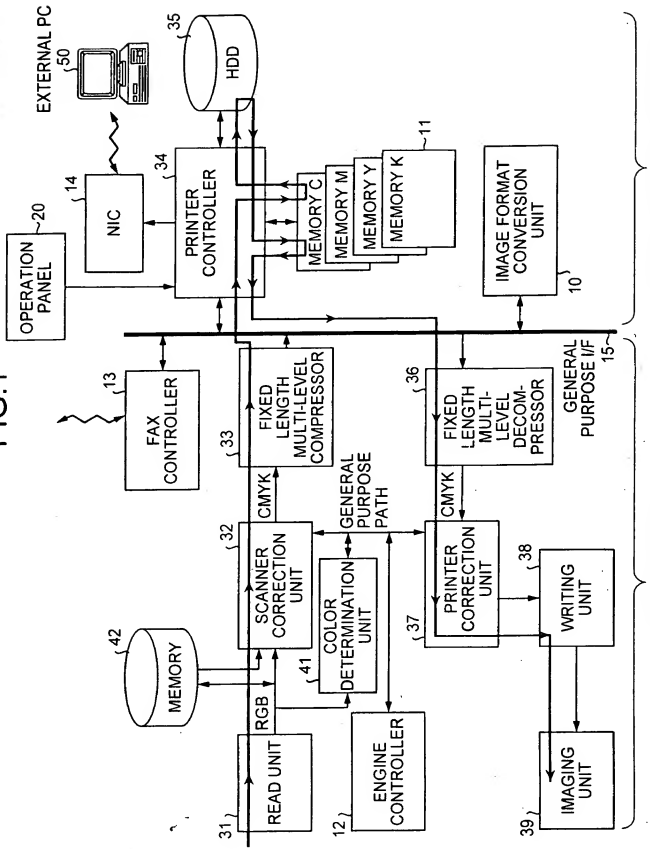


FIG.2

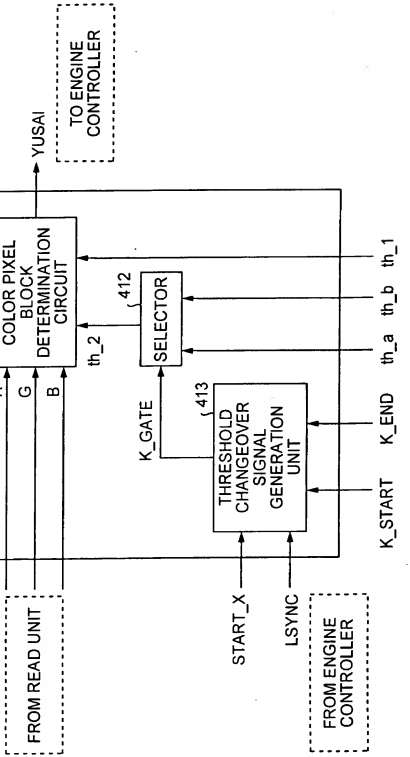

41
411
COLOR PIXEL BLOCK DETERMINATION CIRCUIT
412
SELECTOR
413
THRESHOLD CHANGEOVER SIGNAL GENERATION UNIT
YUSAI
TO ENGINE CONTROLLER
R
G
B
th_2
K_GATE
th_1
th_b
th_a
K_END
K_START
START_X
LSYNC
FROM READ UNIT
FROM ENGINE CONTROLLER

FIG.3

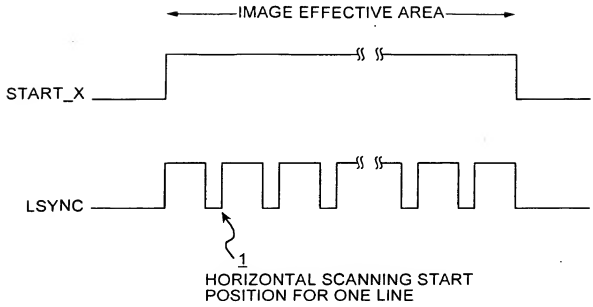


IMAGE EFFECTIVE AREA
START_X
LSYNC
1
HORIZONTAL SCANNING START POSITION FOR ONE LINE

FIG.4

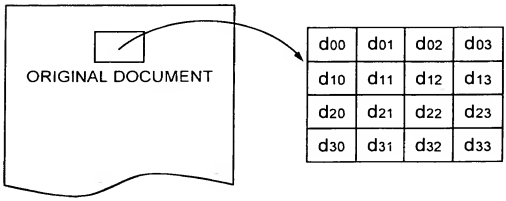

ORIGINAL DOCUMENT
d00 d01 d02 d03
d10 d11 d12 d13
d20 d21 d22 d23
d30 d31 d32 d33

FIG.5

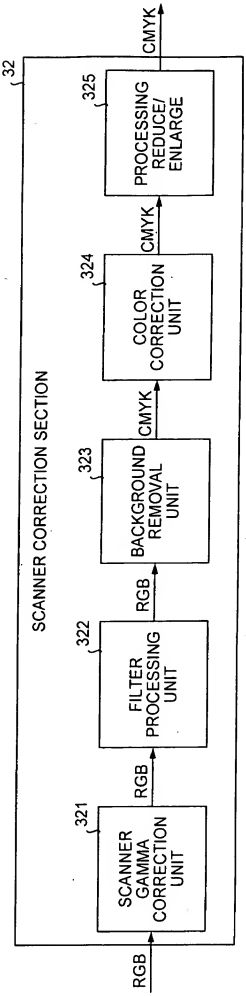

RGB
SCANNER CORRECTION SECTION
321
SCANNER GAMMA CORRECTION UNIT
RGB
322
FILTER PROCESSING UNIT
RGB
323
BACKGROUND REMOVAL UNIT
CMYK
324
COLOR CORRECTION UNIT
CMYK
325
PROCESSING REDUCE/ ENLARGE
CMYK
32

FIG.6

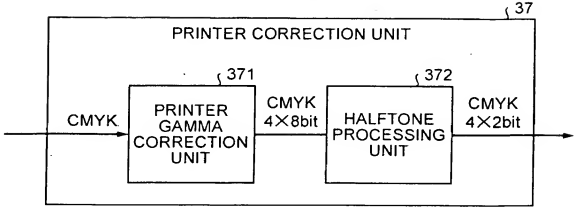

37
PRINTER CORRECTION UNIT
371
372
CMYK
PRINTER GAMMA CORRECTION UNIT
CMYK 4×8bit
HALFTONE PROCESSING UNIT
CMYK 4×2bit

FIG.7

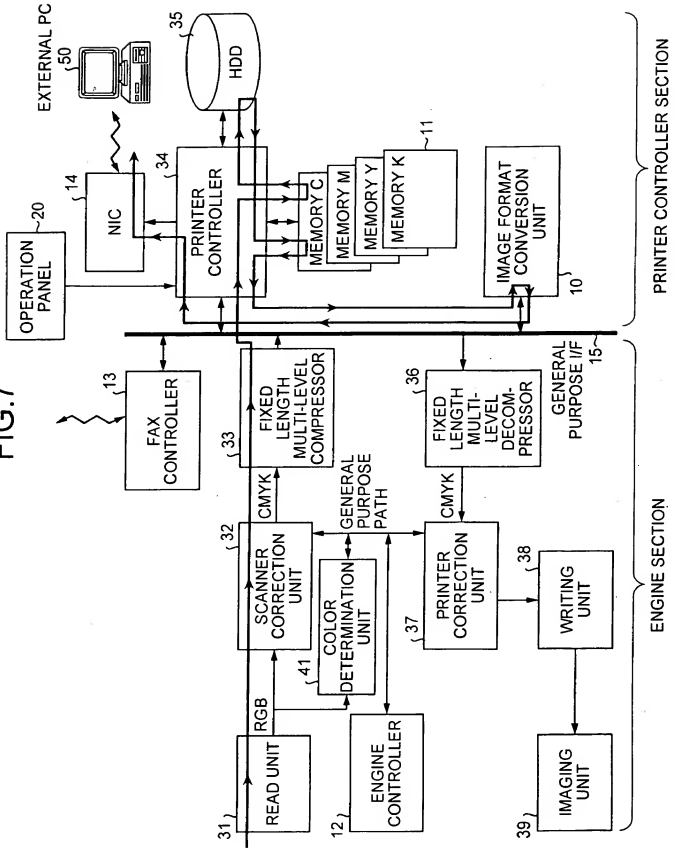

EXTERNAL PC
50
HDD
35
NIC
14
PRINTER CONTROLLER
34
OPERATION PANEL
20
MEMORY C
MEMORY M
MEMORY Y
MEMORY K
11
IMAGE FORMAT CONVERSION UNIT
10
PRINTER CONTROLLER SECTION
FAX CONTROLLER
13
FIXED LENGTH MULTI-LEVEL COMPRESSOR
33
FIXED LENGTH MULTI-LEVEL DECOM-PRESSOR
36
GENERAL PURPOSE I/F
15
CMYK
GENERAL PURPOSE PATH
CMYK
SCANNER CORRECTION UNIT
32
COLOR DETERMINATION UNIT
41
PRINTER CORRECTION UNIT
37
WRITING UNIT
38
RGB
READ UNIT
31
ENGINE CONTROLLER
12
IMAGING UNIT
39
ENGINE SECTION

FIG.8

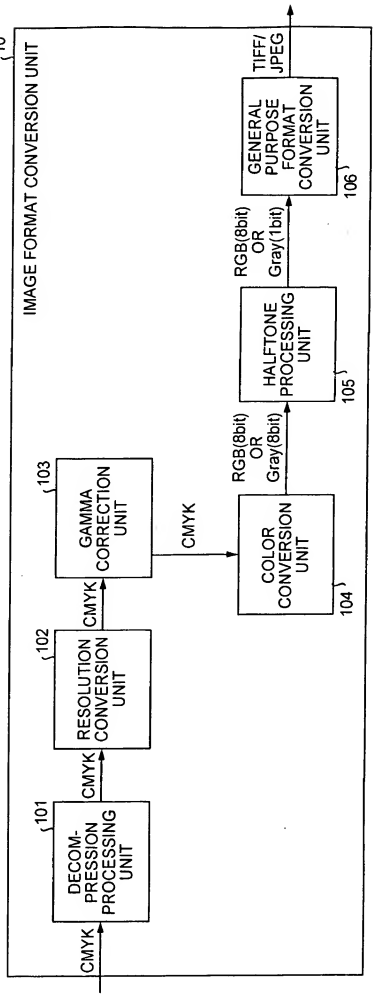

10
IMAGE FORMAT CONVERSION UNIT
CMYK
101
DECOM-PRESSION PROCESSING UNIT
CMYK
102
RESOLUTION CONVERSION UNIT
CMYK
103
GAMMA CORRECTION UNIT
CMYK
104
COLOR CONVERSION UNIT
RGB(8bit) OR Gray(8bit)
105
HALFTONE PROCESSING UNIT
RGB(8bit) OR Gray(1bit)
106
GENERAL PURPOSE FORMAT CONVERSION UNIT
TIFF/ JPEG

FIG.9A

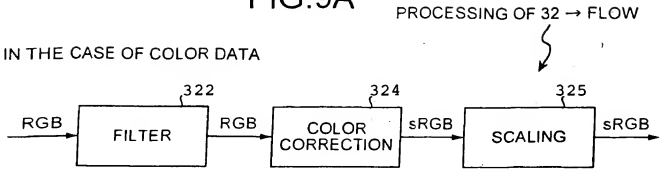


FIG.9B

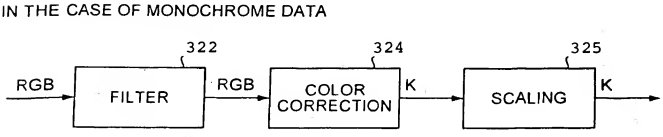


FIG.10A

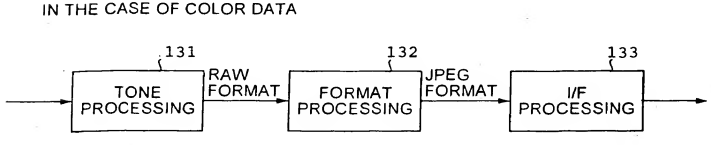


FIG.10B

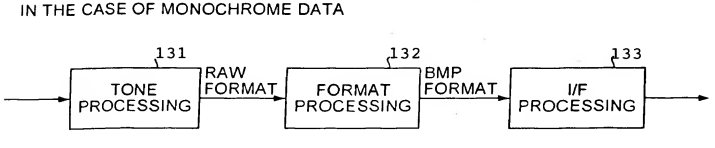


FIG.11A

IN THE CASE OF COLOR DATA

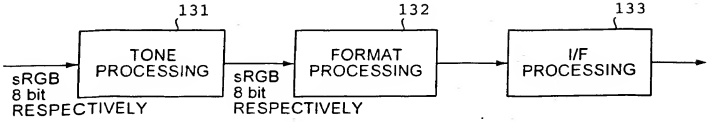
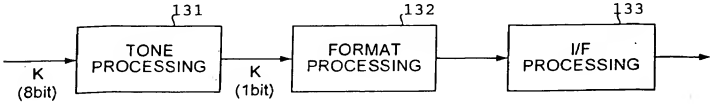


FIG.11B

IN THE CASE OF MONOCHROME DATA